(No Model.)

A. F. SPAULDING.

STONE POLISHING MACHINE.

No. 515,801. Patented Mar. 6, 1894.

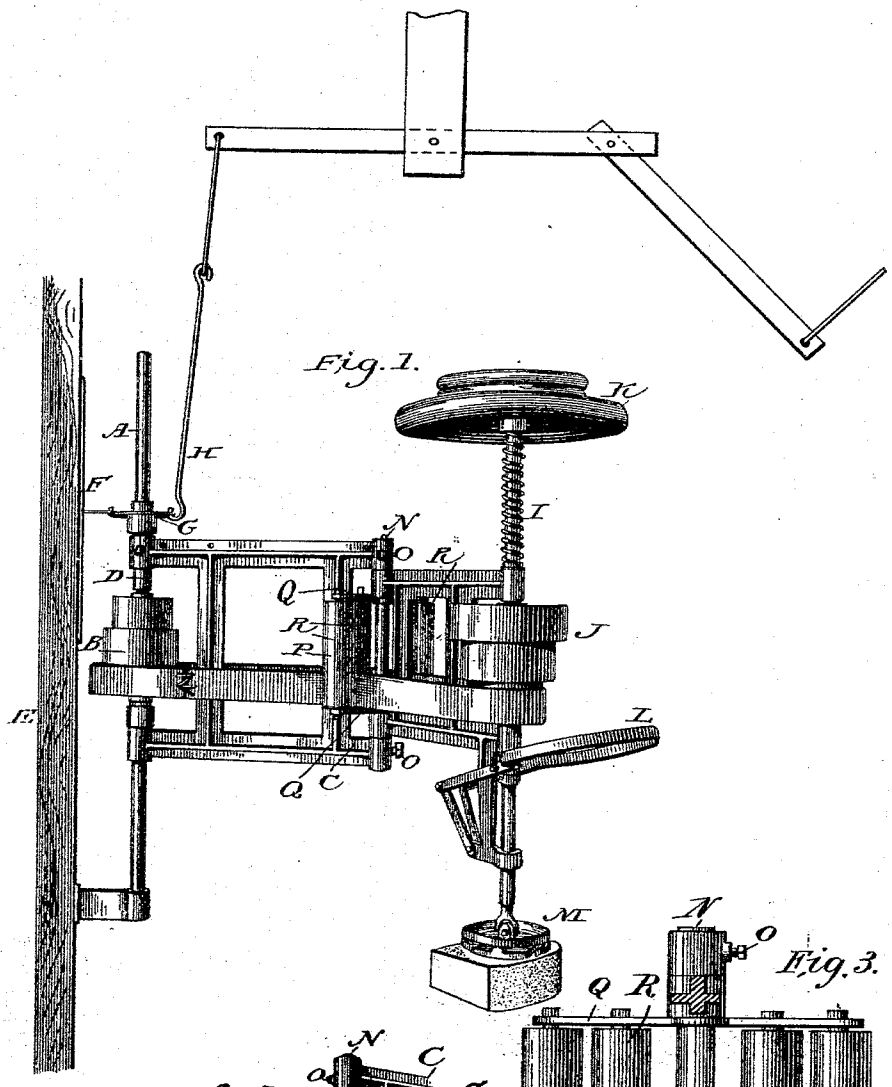

Fig. 1.

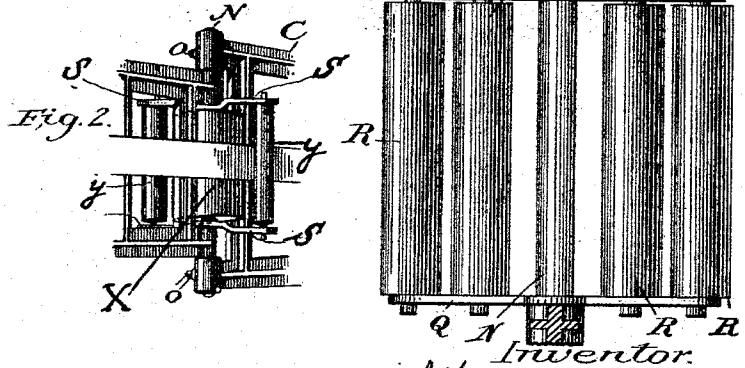

Fig. 3.

Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

ALFRED F. SPAULDING, OF NORTHFIELD, VERMONT.

STONE-POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 515,801, dated March 6, 1894.

Application filed December 1, 1892. Serial No. 453,792. (No model.)

To all whom it may concern:

Be it known that I, ALFRED F. SPAULDING, of Northfield, in the county of Washington and State of Vermont, have invented certain new and useful Improvements in Stone-Polishing Machines, of which the following is a specification.

The object of this invention is to provide adjustable roll carrying arms, located at, or near, the center of the machine. These to be used on a swinging or folding frame, provided with pulleys at either end, carrying a single belt.

Figure 1 is a view in perspective, showing its various combinations, with my belt-regulating device located at the pivotal point. A is the main drive shaft, to which is attached cone pulley B, the swinging and jointed frame C, loose sleeve D, and collar G. Cone pulley B rests on the lower frame arm, and is held on the shaft by a spline secured to the standard, and by the shaft hangers. At the front end of the jointed frame the driven or grinder shaft is secured by passing through the frame arms, and is held in place by shaft spring I, and to this shaft cone pulley J is secured. On the top of this shaft, balance wheel K is located; which serves to hold the springs in place and operates as a weight in polishing stone. Cone pulley J is located between the frame arms and held in a stationary position on the shaft by means of set screws passing through the pulley. L is a lever convenience to move the machine in any desired direction. Attached to the lower end of the ball joint, or other fastening, is a polishing wheel. In polishing stone, wheels of different weights are found to be necessary. To obviate the necessity of changing the shaft wheel, balance wheel M is placed on the stone polishing wheel. This lower balance wheel, located on the stone polishing wheel, corresponds so nearly with the one located at the top of the driven shaft, as to enable the machine to run without seeming top-heavy or out of balance, as it does when the weight is all located in one place. It will be noticed that frame C has a joint near the middle, which allows the frame to be turned in any direction. The joint is formed by shaft N passing through the arms of the frame, and is held in place by set screws O O. Located at the pivotal point of the machine on shaft N, is the adjustable belt regulating device, composed of arms Q Q, carrying-rolls R R R R. A belt leading from the pulley on the driven shaft, and passing between rolls R R, located on either side of shaft N, causes the adjustable device to turn in either direction with the frame, which arrangement maintains the normal length of the belt at different angles. The driven shaft to which the polishing wheel is secured, is made automatic by the aid of the spiral spring on the driven shaft, which allows the polishing wheel to pass over uneven or oval surfaces with ease, a feature much to be desired in stone polishing machines.

Fig. 2 shows a modified form of belt-regulator, the arms of which are located at the pivotal point of the frame on shaft N, and the large roll x is also located on shaft N. The adjustable bars on this shaft carry rolls y y journaled in these arms. The single belt, belted from the pulleys at either end of the machine, passes between pulleys x and y y on either end of the adjustable bars. By this arrangement the adjustable arms S S carrying the rolls y y, are allowed to turn in any direction with the frame, while the large roll x remains stationary on shaft N. By this means the normal length of the belt is maintained the same as when using four rolls. In using the entire machine at different points of height, it is raised and lowered and held at these points in the usual way.

Fig. 3 shows the belt regulating device detached from the machine.

Having fully described my invention, what I claim as new, and desire to secure Letters Patent thereon, is—

The combination of the drive shaft and the pulleys thereon, of the jointed frame, jointed upon said shaft and having the grinding shaft and its pulleys journaled in its outer end; the arms mounted upon the pivot of the joint in said frame and the rolls journaled in said arms, all substantially as shown and described.

In testimony that I claim the foregoing I have affixed my signature in the presence of two subscribing witnesses.

ALFRED F. SPAULDING.

Witnesses:
E. M. WOOSTER,
M. MARTIN.